UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,627	01/30/2002	R. Christopher deCharms	27969-701	4476

21971 7590 11/02/2005

WILSON SONSINI GOODRICH & ROSATI
650 PAGE MILL ROAD
PALO ALTO, CA 94304-1050

EXAMINER	
AZARIAN, SEYED H	

ART UNIT	PAPER NUMBER
2627	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental Notice of Allowability	Application No. 10/062,627	Applicant(s) DECHARMS, R. CHRISTOPHER	
	Examiner Seyed Azarian	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *supplemental information disclosure statement filed on 9/12/2005*.

2. ☒ The allowed claim(s) is/are *1-12, 15-16,19 now renumbered as 1-15*.

3. ☒ The drawings filed on *30 January 2002* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 9/12/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *8/18/2005* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Applicants Attorney (Mrs. Maya Skubatch, Reg No. 52,505), on August 18, 2005, without traverse.

3. The application has amended as follows: attach paper

In the claims as follows:

1. (Currently Amended) Computer executable software and device for guiding brain activity training comprising:

logic which takes data corresponding to activity measurements of one or more internal voxels of a brain and determines one or more members of the group consisting of: a) what next stimulus to communicate to the subject, b) what next behavior to instruct the subject to perform, c) when a subject is to be exposed to a next stimulus, d) when the subject is to perform a next behavior, e) one or more activity metrics computed from the measured activity, f) a spatial pattern computed from the measured activity, g) a location of a region of interest computed from the measured activity, h) performance targets that a subject is to achieve computed from the measured activity, i) a performance measure of a subject's success computed from the measured activity, j) a subject's position relative to an activity measurement instrument; and

logic for communicating information based on the determinations to the subject in substantially real time relative to when the activity is measured wherein the information communicated is an instruction to the subject determined by a computer executable logic and is selected from a set of instructions stored in memory, the selection being based upon the brain activity measured and wherein the information is communicated by a manner selected from the group consisting of providing audio to the subject, providing tactile stimuli to the subject, providing a smell to the subject, displaying an image to the subject.

2. (Original) The software and device according to claim 1 wherein measuring brain activity is performed by fMRI.

3. (Original) The software and device according to claim 1 wherein the determinations are made in less than 10 seconds relative to when the activity is measured.

4. (Original) The software and device according to claim 1 wherein the determinations are made in less than 1 second relative to when the activity is measured.

5. (Original) The software and device according to claim 1 wherein the determinations are made in less than 0.5 second relative to when the activity is measured.

6. (Original) The software and device according to claim 1 wherein the information is determined while the instrument used for measurement remains positioned about the subject.

7. (Original) The software and device according to claim 1 wherein the activity measurements are made using a device capable of taking measurements from one or more internal voxels without substantial contamination of the measurements by activity from regions intervening between the internal voxels being measured and where the measurement apparatus collects the data.

8. (Original) The software and device according to claim 1 wherein measurements are made from at least 100 separate internal voxels, and these measurements are made at a rate of at least once every five seconds.

9. (Original) The software and device according to claim 1 wherein measurements are made from a set of separate internal voxels corresponding to a scan volume including the entire brain.

10. (Original) The software and device according to claim 1 wherein the size of the internal voxels have a total three dimensional volume of 5x5x5cm or less.

11. (Original) The software and device according to claim 1 wherein the size of the internal voxels have a total three dimensional volume of 1x1x1cm or less.

12. (Original) The software and device according to claim 1 wherein the software further comprises logic for selecting one or more of the internal voxels to correspond to a region of interest for the subject and using the selected internal voxels of the region of interest to make the one or more determinations.

13. (Cancelled)

14. (Cancelled)

15. (Original) The software and device according to claim 1 wherein the instruction is a text or iconic indication denoting an action that a subject is to perform.

16. (Original) The software and device according to claim 1 wherein the instruction identifies a task to be performed by the subject.

17. (Cancelled)

18. (Cancelled)

19. (Original) The software and device according to claim 1 wherein some of the information communicated to the subject is material to be learned.

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance.

The instant invention generally relates to monitoring physiological activity, particularly in the human brain and nervous system.

The reasons for allowance of independent claim 1, based on applicant amended claim, J.T. Voyvodic reference does not disclose or suggest, among other things, measured brain activity from one or more internal voxel of interest and provides stimulus to subject based on measure brain activity, wherein tactile stimuli to the subject and stimulus is adapted to train subject to each target brain activity.

These key features in combination with all of the other features of the claimed invention are neither taught nor suggested by the J.T. Voyvodic.

Claims 1-12, 15-16 and 19 are allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (571) 272-7443. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached at (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see http:// pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian
Patent Examiner
Group Art Unit 2625
August 23, 2005

SANJIV SHAH
PRIMARY EXAMINER